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Radiative Transfer for Grabs

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Abstract. This contribution advertises freely available teaching materials on the theory of radiative transfer in stellar atmospheres.

1. Elementary course

I teach a yearly course on the basics of radiative transfer to second-year students of physics and astronomy at Utrecht. The course is summarized in the second chapter of the advanced course described below and represents an extended version of the first chapter of the book by Rybicki & Lightman. This elementary course is not yet available on the web, awaiting rewriting in English, but the Dutch-language notes have been translated provisionally by Ruth C. Peterson (Santa Cruz) in 1992. You might ask her for a paper copy, or request a slightly improved version from the astronomers at Uppsala.

2. Advanced course

Utrecht astronomy students also get a more advanced course on radiative transfer in stellar atmospheres from me. The lecture notes are freely available in the form of postscript files[1]. They represent a middle road between Mihalas' *Stellar Atmospheres* and the books by Novotny and Boehm-Vitense.

3. Numerical exercises

These courses are accompanied by numerical exercises using IDL:

- Stellar Spectra A, *Basic Line Formation*, for first-year students;
- Stellar Spectra B, *LTE Line Formation*, for second-year students;
- Stellar Spectra C, *NLTE Line Formation*, for third-year students.

The first set is complete and on the web. The second set is planned for the spring of 1999. The third set has been developed by Mandy Hagenaar over the past years and should become web-available soon.

[1] http://www.astro.uu.nl/~rutten